

WHAT IS CLAIMED IS:

1. A one-way clutch unit comprising:

a first one-way clutch including a first outer ring having in an inner periphery thereof an engagement surface and a raceway surface which are adjacent to each other, a first inner ring having in an outer periphery thereof an engagement surface and a raceway surface which are adjacent to each other, first engagement members disposed between the engagement surface of the first outer ring and the engagement surface of the first inner ring, and first balls disposed between the raceway surface of the first outer ring and the raceway surface of the first inner ring; and

a second one-way clutch including a second outer ring having in an inner periphery thereof an engagement surface and a raceway surface which are adjacent to each other, a second inner ring having in an outer periphery thereof an engagement surface and a raceway surface which are adjacent to each other, second engagement members disposed between the engagement surface of the second outer ring and the engagement surface of the second inner ring, and second balls disposed between the raceway surface of the second outer ring and the raceway surface of the second inner ring; wherein

an annular recess is provided in the inner periphery of the first inner ring of the first one-way clutch; and wherein

one end portion of the second one-way clutch is  
5 disposed in the annular recess.

2. The one-way clutch unit according to claim 1, wherein the annular recess is provided in the inner periphery of a side of the raceway surface of the first  
10 inner ring of the first one-way clutch.

3. The one-way clutch unit according to claim 2, wherein, in the first one-way clutch, the first engagement members are engagement rollers, the engagement surface of  
15 the first outer ring is an engagement cylindrical surface, and the engagement surface of the first inner ring is an engagement cam-surface.

4. The one-way clutch unit according to claim 1, wherein an end portion on the side of the raceway surface  
20 of the second one-way clutch is disposed in the annular recess.

5. The one-way clutch unit according to claim 4,  
25 wherein, in the second one-way clutch, the second

engagement members are engagement rollers, the engagement surface of the second outer ring is an engagement cam-surface, and the engagement surface of the second inner ring is an engagement cylindrical surface.

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6. The one-way clutch unit according to claim 1, wherein a curved surface connects an end surface and a peripheral surface in the annular recess of the first inner ring; and wherein a curved surface connects an end surface and an outer peripheral surface in an end portion of the second outer ring which is disposed in the annular recess of the first inner ring.

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